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# **Identifying the barriers of knowledge transfer in collaborative processes of public service sector**

## **a study of tax determination process**

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### **Abstract:**

In a collaborative process, several independent organizations work together in order to achieve a specified goal and each of them is responsible for executing a part of the relevant process. Since the relevant process is executing through the flow of information and knowledge among the participating organizations, so facilitating inter-organizational knowledge transfer is suggested as a way to improve these process performance. Creating facilities is impossible without identification of existing barriers of inter-organizational knowledge transfer. The current paper tries to identify the barriers of knowledge transfer among public sector organizations using the study of existing literature and a case study of a collaborative process in tax determination process among tax administration, Bank and Municipality. The required information was gathered through semi-structured interview and coded and analyzed according to grounded theory. Findings show that "technical tools", "governmental laws", "organizational features" are the most influential factors of inter-organizational knowledge transfer.

**Keywords:** inter-organizational knowledge transfer, collaborative processes, knowledge transfer barriers, public sector

# Identifying the barriers of knowledge transfer in collaborative processes of public service sector

## a study of tax determination process

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### I. INTRODUCTION

With the rapid changing business environments, enterprises need to significantly increase their degree of collaboration capability [1-3]; this lead to emerge collaborative processes. Collaborative processes involve two or more independent organizations engaged in interaction with each other, working towards common goals. These organizations share risks, benefits and their resources such as human resources, organizational knowledge and etc. [4-8]. Collaborative business processes help organizations to create dynamic and flexible collaborations to synergically adapt to the changing conditions, and stay competitive in the global market [7]. Successful collaborative process can be attributed to numerous factors. If these factors are not managed, it is possible that this type of processes can result in problem such as internal and external conflicts, cost increase and loss of customer

satisfaction [5, 9, 10]. During collaborative processes development, inter-organizational information sharing is important when critical information for running sub-processes are usually scattered around independent organizations [1, 9-12], thereby knowledge sharing has increasingly become an important issue for the collaborative processes [5, 13-15]. The public sector under the governance of the government is full of collaborative processes. In this area, organizations are cooperating with each other due to government’s high level goals. Importance of knowledge sharing in collaborative processes cause to organizations shift from a model that emphasized information protection to one where cross-organization information sharing is the new goal [11, 13, 15-19]. Although inter-organizational knowledge sharing in collaborative process has received more attention, initiatives often fail due to various reasons [15-17, 20-23].

To facilitate knowledge sharing, it is important to understand the factors that affect knowledge sharing behaviors of parties. There is a significant amount of research on determinants of knowledge sharing in organizations; but most of these research has been done in private sector organizations and few studies focus knowledge sharing in public sector [11, 22]. Also a review of the inter-organizational literature reveals that most studies of the inter-organizational knowledge sharing have focused on inter-organizational knowledge sharing in collaborative supply chain, virtual organizations, and multinational organizations. In other words, there are no comprehensive researches on inter-organizational knowledge sharing in collaborative processes especially in public sector. Given these gaps in the literatures, the goal of this paper is to construct an exploratory framework that may facilitate the study of factors that affect knowledge sharing in collaborative processes in public sector.

This study adopts a case study method to extend current literature finding about inter-organizational knowledge sharing to a different context. Collected data were analyzed by applying grounded theory techniques to solve the question

“what are the determinants of inter-organizational knowledge sharing in collaborative processes in public sector?”

Structure of this paper is as follows. Firstly, a literature review regarding relevant determinants of knowledge sharing in collaborative processes and collaborative process definition. Secondly, the research methodology followed for the development of this research is explained. Thirdly, provide the analysis and discussion of our findings. Finally, conclusions and research implications are presented.

## II. COLLABORATIVE PROCESSES AND KNOWLEDGE SHARING

### A. Collaborative processes

There is a bilateral relationship between collaboration and collaborative processes [4]. Collaboration needs common goals, language and experience which should be shared in a specific environment [24]. In another definition collaboration is defined as a process in which independent organizations align their strategies and decisions [25].

In collaborative processes two or more organizations collaborate to realize shared goals; so working more than one organization, is one of the most important features [26]. In this case each organization shares its capabilities. (Rajsiri, 2009) explains main features of collaborative processes as follows [27]

- Achieve common goal(s)
- Established between two or more independent organizations
- Make implicit supervision on organizations
- Sharing resources and capabilities between organizations

(Qiming and Meichun, 2001) define collaborative processes as a process established according to a specific protocol like online purchasing between two or more independent organizations. A collaborative process does not run by a central workflow engine, rather than it contains specific events of different processes. Each of these events have a definition like process with their own sub processes and data. Based on this a collaborative process includes some simple processes are which collaborating and do their own roles [28].

Collaborative processes are defined as a process in which at least two parts are collaborating; for modeling this kind of processes, it is necessary to show dependencies of parties beside their collaboration [29]. these processes contain a lot of human knowledge and experience [29]. Autonomous organizations in collaborative processes is the most important feature of collaborative processes. This feature led to create different levels of decision-making authority and responsibility in return to results of process [30]. Autonomy of parties and being knowledge base mentioned by [31] too. According to literature review features of collaborative process are gathered in TABLE I.

TABLE I. : MAIN FEATURES OF COLLABORATIVE PROCESS

Process Feature	References
Establish between more than one autonomous organizations	[4, 6, 8, 26, 30-32]
Common goal(s) for all organizations	[4, 6, 20, 33, 34]
implicit supervision on organizations	[4]
circulate high amount of knowledge and information	[4, 31, 33-36]
resource sharing	[4, 33, 34]

### B. Knowledge Sharing

According to the literatures, there is a difference between knowledge sharing and transfer. Knowledge sharing refers to the provision of task information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or policies and procedures implementation; but knowledge transfer involves both the sharing of knowledge by the knowledge source and the acquisition and application of knowledge by the recipient. “Knowledge transfer” typically has been used to describe the movement of knowledge between different units, divisions, or organizations rather than individuals [37]. [38] argue that barriers of inter-organizational knowledge transfer are knowledge-related such as the recipient's lack of absorptive capacity, causal ambiguity, and a laborious relationship between the source and the recipient. (Riege, 2007) try to offer comprehensive list of actions that help managers to prevail over numerous internal knowledge transfer barriers in multinational corporations (MNCs). He classified barriers in 3 class, individuals barriers, organizational barriers and technological barriers [39]. Zapata and his colleagues examine knowledge generation and transfer in information technology-related small and medium enterprises (SMEs). By this, firm’s strategic planning process should include the knowledge to be transferred. Also, the attitudes and abilities of those who take part in the transfer process are important for knowledge transfer, especially for tacit knowledge transfer [40]. In addition, some factors such as organizational culture and leadership behavior can have strong effects on knowledge creation and transfer processes [41].

Organizations before using transfer knowledge, must ensure about validity of received knowledge and information. On the other hand, possible abuse of shared knowledge may reduce the desire to participate in knowledge sharing with other organizations; Shared knowledge abuse can threaten organizations competitive advantages. All of these can raise risks of inter-organizational knowledge transfer. Loosing organization autonomy, Leaked confidential information and knowledge out and abusing it can raise risks too. Knowledge can be source of organizational power and its loss can threat organizational power in the business environments, so organizations avoid inter-organizational knowledge sharing [20]. These risks are so important determinants that weakened knowledge transfer processes. Intellectual property law can reduce these risks. Inter-organizational process strategy can have positive effects on reducing these risks. Also it can persuades organizations to participate in inter-organization

knowledge sharing. In addition to Intellectual property law, identifying organizations' roles and responsibilities, respecting the autonomy of the parties and the authorizing organizations wisely can build trust between the parties and reduce risk of inter-organizational knowledge transfer [17].

In inter-organizational processes power game is another barrier to knowledge transfer. Power games are defined as the unjust use of power to increase the value or influence an individual or workgroup in an organization. In inter-organizational relationships, power is the ability of firm to compel compliance. Also in supply chain power refers to the control by a company over the resources that partner's needs. Knowledge and information can be a source of power in organizations. In another word, knowledge and information is considered as an asset and can be used for evaluating organizations power, so information sharing can be viewed as a loss of power. Power game can exist between organizations in inter-organizational relations. The more power games exist, the less sharing of information and knowledge occurs [17, 42-44].

Another barrier to inter-organizational knowledge transfer is conflict. Conflict is defined as "an expressed struggle between at least two inter-dependent parties who perceive incompatible goals, scarce rewards, and interference from the other party in achieving their goals". Conflict can be emerge from incompatible goals, scarce rewards, and interference from the other party in achieving their goals [21]. This kind of conflict is dysfunctional conflict. Dysfunctional conflict constitute behaviors such as distorting information to harm other decision makers, interacting with each other with hostility and distrust or forming barriers during the process of decision-making [15]. Conflict can be managed by aligning between common goals of inter-organizational relations and exclusive goals of organizations. The difference can be reduced by negotiations between parties [45].

Interpersonal similarity is another key driver behind inter-organizational knowledge transfer. Also inter-organizational similarity have same effects. Some dimensions of interpersonal similarity are religious, cultural background, shared language, organizational status, social and job position, capability and accepted value. Interpersonal similarity leads to a higher tendency for interaction and increasing the sharing of business knowledge [43, 46]. Inter-organizational similarity can be evaluated according to organizational values and culture. Potential difference between organizational values and culture can be caused to weaken quality and quantity of inter-organizational knowledge sharing [47]. Difference of organizational culture and values can change the role and authority of similar positions in organizations and change communication rules. This can be appeared as a barrier to inter-organizational knowledge sharing [47]. Beside individual similarity, organizational similarity can create a common language between organizations. This common language can facilitate inter-organizational knowledge sharing. Organizations can be similar because of joint activity, same position in the business environment or workplace and etc... too. [46]. Having a shared vision can be a sign of similarity between organizations. Shared vision is shared belief of organizations about good behavior, goals, policy, planning horizon, job stability, control systems and etc.... similarity of

organizations can increase trust between them and improve quality and quantity of inter-organizational knowledge sharing consequently [48, 49]. Also organizations climate can encourage employees to participate in knowledge sharing processes. Degree of courage and degree of empathy, which measured organizational climate were found to have a significant main effect on knowledge sharing in public sector [22].

Ability of a firm to value, assimilate, and utilize new external knowledge has a great influence on inter-organizational knowledge transfer. This ability is absorptive capacity. An organization with high level of absorptive capacity can participate in inter-organizational knowledge effectively. Organizations are which sharing knowledge should have the same absorptive capacity, otherwise received knowledge become unusable; This means the difference between absorptive capacities of organizations can be a barrier for inter-organizational knowledge transfer [50, 51].

Organizations management and leadership have an inescapable effect on inter-organizational knowledge sharing. Organization management can facilitate inter-organizational knowledge sharing by setting a good strategy, providing required resources and etc.... A good strategy can facilitate reaching agreement between organizations and prevent from dysfunctional conflicts. This effect can be augmented by executive interference, creating formal authorities and authorizing proper person and conduct inter-organizational relationships informally [7, 52].

The ability of an organization for receiving and using information from other organizations is in association with structure and information technology [4]. Lacking in IT systems is one of the most important barrier for knowledge sharing in public sector [11]. Information technology is a physical way for connecting organizations; but technology alone cannot establish connection. Before using technical tools for inter-organizational information transfer it is necessary to check consistency of organizations hardware and software. Also Tools are used by the parties, should be able to communicate with each other. The ability of personnel's of organizations to use tools is important too [18, 48]. The tools should have the capability of storing, classifying and managing of received information [53]. Type of tools and technology determined by knowledge nature. Knowledge characteristics such as being implicit, explicit, and vague or its complexity can change rate of knowledge sharing rate and also usability of received knowledge. accordingly vagueness of knowledge is a barrier to knowledge sharing [17]. Like knowledge nature, knowledge architecture is important in knowledge sharing too. Knowledge architecture is defined as structure and location of knowledge, degree of simplicity and explicitly and how to attach it to various parts of processes and organization departments. Information technology is that used in an organization can determine knowledge architecture. This architecture can have a great influence on capability of organizations in knowledge and information recording, monitoring, transferring and storing [51].

Determinants were mentioned in literature review are showed in Fig.1.



Fig. 1. : Determinants of inter-organizational knowledge transfer

### III. RESEARCH METHODOLOGY

This study adopts a case study method to extend current literature finding about inter-organizational knowledge sharing to a different context. We selected process of determining inheritance tax in Iran tax administration from public sector as our case. This process is similar to collaborative processes.

Qualitative data were collected through semi-structured interviews with experts in selected processes. A purposive sampling by using snowball methods was adopted to identify relevant interviewees. Purposive sampling commonly used in qualitative studies. It is usually used in the selection of information-rich cased to conduct in-depth study [11]. In total, 4 participants were interviewed. The average duration of the interviews was about 2 hours. In-depth and semi-structured interviews were used to collect data for analysis. A semi-structured interview is open, allowing both the interviewer and the person being interviewed the flexibility to probe for details or discuss issues, so it has flexibility to follow up on new information presented in the context of an interview and to explore in-depth new findings. Semi-structured interviews have a set of questions; the questions do not need to be asked in any given order, rather they should be asked in a way that develops the conversation. Further questions when something important is provided. The series of questions are in the general, forming an interview protocols [54, 55]. In addition, organizational documents and reports, were also collected and used for the purpose of data analysis.

The collected data were transcribed and analyzed by applying grounded theory techniques. Three types of coding, open coding, axial coding, and selective coding, are adopted to analyze and interpret qualitative data [56]. During the data analysis, the qualitative software tool (NVivo 8) is employed to support coding and analysis activities.

### IV. CASE DESCRIPTION

#### A. Process of determining inheritance tax in Iran tax administration (public sector)

Iran national tax administration (ITNA) is intended to provide all requirements needed for administrating tax plans and for doing legal duties concerning tax collection as efficiently as possible. This administration is a government institution established under the supervision of the minister of economic affairs and finance. Tax resource such as inheritance tax, direct tax, indirect tax, tax on incidental income and etc. were defined by this administration. Each of these tax resources has own experts and processes. In this research for determining the boundary of the case and restricting data gathering process, studied case was limited to the process of determining inheritance tax. This process is an inter-organizational process in which inheritance tax determined by collaboration of governmental and non-governmental organizations such as tax administration, banks, minister of foreign affair, judiciary and etc. This collaboration established by requesting information from other organizations. Collaboration will be stopped if inter-organizational information flow stopped. According to these we can conclude that this process is useful for our research.

### V. RESULT PRESENTATION AND ANALYSIS

To analyze interviews texts, we select the sentence as the unit of analysis. First step was open coding in which all the sentences were reviewed. Sentences that showed a determinant of inter-organizational knowledge or information transfer were selected. In this step 250 codes were extracted.

The second step was about axial coding. Axial coding is similar to construct a single structure of multiple indicators in hypothesis test researches. In other words, researcher use multiple source of evidences for constructing structures. Evidences define constructs and unique them. Researchers try to establish the validity of the constructs. Exploration and explaining a phenomenon is the basis of this approach. There are a lot of relations between themes and explanation of these relations are the main purpose of such researches. After exploration of relations, it should be verified by gathering new and real data [56].

For axial coding, extracted open codes were studied carefully and, besides of each of them a note was left. Research notes were showing the general meaning of open codes and helping for clustering open codes and extracting themes. A short part of open codes and related research notes are shown in TABLE II.

By assigning research notes to all the open codes, it was possible to extract themes. For this purpose, we studied research notes and clustered same ones. Clustered research notes were reviewed again and by comparing with factors that have been mentioned in literatures, themes extracted. A short part of research notes (clustered ones) and extracted themes are shown in TABLE III.

TABLE II. SAMPLE OPEN CODES AND RESEARCH NOTES

Open code	Researcher note
Unfortunately, the received data may be incomplete, so it is needed to review and check it, but because of existing laws there is no need to argue about it. It is possible to revise our decision whenever we receive complete information.	Government laws for giving information to tax administration
It is possible to lawsuit, but nobody does it, because of existing law organizations have to give the requested information to tax administration.	Compulsions to give information and lawsuit possibility
Existing law and its explicitness, force manager to study it and give their information to tax administration in accordance with it.	Existing law and its explicitness to answer to tax administration request
There are no common technical system between our organization and other organizations collaborating with us.	the absence of a common technical system between collaborating organizations
All contacts are in the paper.	Contacts are paper base and no use of technical tools

TABLE III. SAMPLE RESEARCH NOTES AND EXTRACTED THEMES

Researcher note	theme
Government laws for giving information to tax administration	Supportive law
Compulsions to give information and lawsuit possibility	
Existing law and its explicitness to answer to tax administration request	
the absence of a common technical system between collaborating organizations	lack of common technical tools
Contacts are paper base and no use of technical tools	
determination official routines by organizational structure	Organizational features
Heavy workload have negative effects on information transfer	

2-step interview texts analysis, shows that existing governmental laws, technical tools, organizational and individuals features are the most important determinant of inter-organizational knowledge sharing in collaborative processes. Diversity of open codes assigned to determinants are showed in Fig.2. Detailed discussions about these determinants are presented as follow (open codes reported from interviews text are showed in *italic and underline text*).

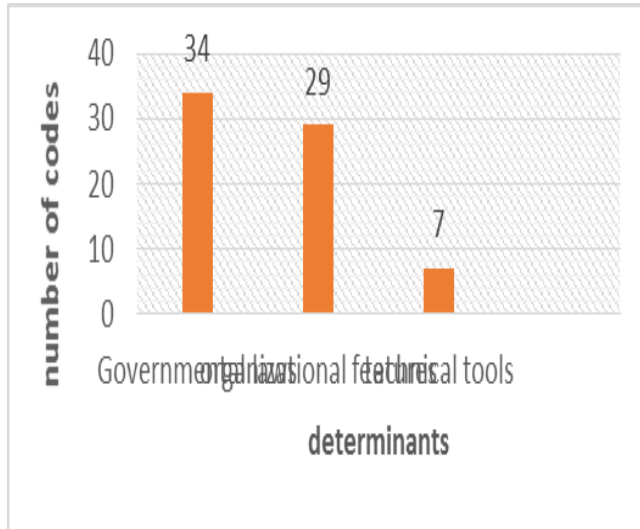


Fig. 2. Diversity of codes

#### A. Governmental Laws

In governmental public sector, inter-organizational knowledge sharing is impossible if there is no law and official routine for it. This fact in tax administration activities was observed frequently.

*There is a governmental law by which other organization have to answer to tax administration request for their information.*

Tax administration requests information from other organizations by an official letter in which needed information has been listed. In the public sector in which governmental organizations are working, inter-organizational relationships are shaped by governmental law. First of all, it creates a communication protocol for organizations. Also this law assigns duties of organizations against each other. In other word, organizations are forced to answer to each other by this law. Accessible information of organizations is determined by it too.

*Accessible information can be requested by other organization is determined by law. This can be changed during the time.*

Unfortunately, there are conflicts between governmental laws. These conflicts can halt inter-organizational information transfer.

*Banks have laws by which customer information is confidential, so sharing it with other organization prohibited unless a judge orders.*



Not only governmental laws can create communication protocols, but also can have side effects on inter-organizational information transfer. Risk of transferred information abuse and lack of trust to received information are 2 big barriers of inter-organizational information transfer. In our case because of governmental laws, these barriers are not so important. Organizations share their information with others in official routine with no fearing of abusing shared information. Even misuse of received information in destination of inter-organizational information transfer, nobody can fault owner of shared information. In our case tax administration is doing its daily activities according to received information from other organizations. It is possible to make wrong decision if received information was incorrect and incomplete; but nobody can fault tax administration for their wrong decision because they received information in an official routine in accordance to existing law.

It is possible to trust to received information because it is received in an official routine.

### B. Technical tools

Technical tools with integrated databases have a great role in inter-organizational information transfer. This kind of tools providing requested information by searching in common and integrated database, so by use of this kind of technical tools, the time of inter-organizational information transfer can be reduced.

Sharing information by mechanized tools can solve lots of problems.

Technical tools with integrated databases can facilitate inter-organizational information transfer, but it is necessary to consider some arrangements for using them easily. First of all, official routine should be revised in order to give access to technical tools for searching and gathering information from databases. If formal organizational structures and official routines are not considered in designing technical tools, especially in giving access level for reading and writing data to databases, technical tools will not have positive effects on inter-organizational information transfer as expected.

Mechanized communication should be done head to head. In addition to this, before setting technical tools up for inter-organizational information transfer, it is necessary to consider its prerequisites. The most important prerequisite is suitable governmental laws. Without governmental laws in which inter-organizational information transfer by using mechanized tools had been allowed, transferred information by using technical tools won't be useable. Another prerequisites for technical tools are trained personnel's and technical ones such as internet for web based tools.

### C. Organizational features

Official routines or organizational bureaucracy is a significant determinant of inter-organizational information transfer. Governmental organizations have to observe the governmental laws in inter-organizational information transfer. If information were not received through official routines, it could not be used. In addition to this, all the personnel's cannot

request information from other organizations and only a limited number of personnel's have authority to do it.

It is not allowed that any person in any place in the organizational structure to request information from other organization. Only senior auditors can do this.

In public sector organizational structure can be source of bureaucracy. The public sector has own structure. Head of this structure is government. There is several branch under the organization. These branch are ministries. Public sector structure is showed in Fig.3.

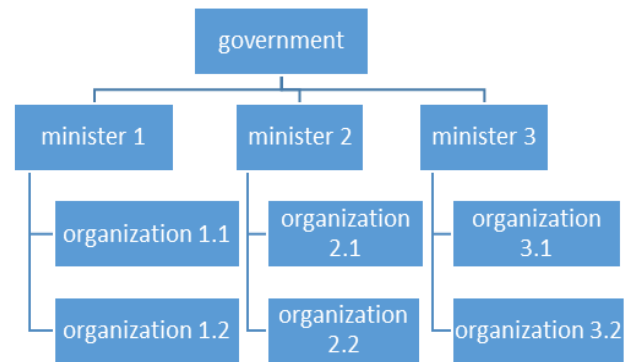


Fig. 3. organizational structure of public sector

According to the public sector organizational structure, when somebody who are working under minister 1 needs some information from organization that are working under minister 2, he or she should observe its particular routines. For example, when somebody in tax administration needs some information from the ministry of foreign affairs, he or she should request information from headquarter of tax administration. Headquarter of tax administration requests needed information from ministry of foreign affairs and after receiving it, give it to who has requested for it.

In tax cases, all needed information can be requested unless it is necessary to request some information from the ministry of foreign affairs. In this case, local tax administration request information from central tax administration and central administration request information from ministry of foreign affairs. Ministry of foreign affairs answers to central tax administration. Finally the central tax administration gives the information to local tax administration.

Type of organizational structure not only defines official routine for requesting information from external sources, but also specifies the person whom can be asked for information. In other word, the more similar organizational structure, the easier inter-organizational information transfer.

Similarity of organizational structure can facilitate inter-organizational information transfer, also flat organizational structure is better for this.

Organizational culture can have a great influence on personnel's behavior. A lot of researches about inter-organizational knowledge sharing have mentioned organizational culture as an important determinant; despite of this, in the public sector, organizations have to observed governmental law about inter-organizational information

transfer. They should answer to other organizations information requests, if it has been done according to the governmental laws.

Existing governmental laws weekend effects of environmental factor such as organizational culture on answering to information requests.

Senior managements of organizations define strategies and main activities of own organizations. They can facilitate inter-organizational information transfer by providing the necessary conditions for cooperation with other organizations. The main influence of senior managers on inter-organizational information transfer is making new and easier routine for it by negotiation with other organizations senior managers. Senior managers of organizations in the public sector can facilitate inter-organizational information transfer by building good relations in higher levels of organizations and good cooperative strategies. This influence can be boosted by setting good common goals with other organizations by which functional conflicts are reduced. Despite of this fact, in public sector, senior managers cannot have effect on it. The main reason for ineffectiveness of senior managers in public sector is operational protocols. In public sector, for changing current routines or designing and implementing new routines, it is needed to legislate new law or adjustment of current laws. In other word, inflexibility of governmental laws causes to eliminate role of senior managers for facilitating inter-organizational information transfer.

Another feature of organizations is its workload. Heavy workload can cause to answer to other organizations information request late. Information request received from another organization has a lower priority than other tasks. This cause to delay answering to information requests. For example, municipalities have heavy workload and cause to delay in answering to information request.

Quality of Inter-organizational information transfer relates to the overall condition of organization environment. In organizations with heavy workload, for example, municipalities, workload have a negative effect on inter-organizational information transfer.

#### *D. Individual features*

Inter-organizational processes between organizations working in the public sector are often personnel oriented; so individual features have inescapable effects on information transfer in them. Often collaborative processes don't have a predetermined routine; they are case based. New circumstances need new requirements. According to this, successful implementation of this kind of processes has a great dependency to the abilities and experience of personnel's.

Working in this process (inheritance tax determination) needs knowledge about all the tax resources. Work experience and tax resource knowledge is so important in this process.

In addition to required abilities and experience, motivation of personnel's and providing their needs have unavoidable effects on facilitating inter-organizations information transfer. In the public sector, organizations employees have not given justification for inter-organizations information transfer. Also

they don't have enough ability for gathering and transferring requested information.

If personnel's work good inter-organizational information transfer done in a short time.

#### *E. Knowledge nature*

In the literature of knowledge and information transfer (in general), nature of knowledge (implicit or explicit knowledge) is an important determinant, but in the public sector, knowledge nature and its details are determined by governmental laws. Organizational information is often recorded and exactly transferred after requesting for it. According to this, it can be inferred that in public sector, knowledge nature is not an important determinant for inter-organizational information transfer.

In information request, needed information is defined exactly.

### VI. CONCLUSION

While our reviews on relative literatures show that : 6 factors affect inter-organizational knowledge transfer (see Figure 1), we find , for public sector, mainly 3 determinants affect information transfer among public organizations.. Our following discussions reveals how these 3 determinant in public sector Consist with the literature.

- Technical tools: as mentioned in literature review, IT systems and tools suitable to people's way of doing their tasks on a daily basis and communicating with each other. Also integrating information systems of different platforms and data standards, and qualities are another barrier in using technical tools for knowledge transfer. In addition to these barriers, in public sector, they need tools with direct access to other organizations databases. In other words, lack of the common technical tools especially with shared databases among organizations in the public sector is one of the main barriers of information transfer. Existing systems often have developed separately and cannot do mechanized information transfer. Also handling access authorization and authentication for shared information is another barrier for this need. Furthermore, because of weakness of technical systems, retrieving and gathering requested information are done slowly.

In the public sector new system development should be observed governmental law and use official routine for mechanized inter-organizational information transfer. This is a great barrier for designing and implementation of technical tools in public sector for inter-organizational information transfer. In addition to this, in public sector, employees do not have enough capability for using technical tools in daily activities; so they prefer to do their works manually. These facts cause to technical tools cannot be used effectively for inter-organizational information transfer in public sector.



- **Governmental laws:** In public sector in which organizations work under the government supervision; governmental laws are the main working framework. The fact that, what information can be requested from each organizations is determined by laws. Official routine for inter-organizational information transferred defined by laws too.

High level of trust can help knowledge and information sharing. Inter-organizational trust decreases when there are concerns of autonomy loss and information misuse by other organizations; but in public sector, governmental laws improve inter-organizational trust by clarity of roles and responsibility, respect for autonomy, and the appropriate exercise of authority of participating organizations in collaborative processes.

Governmental laws have another effects on inter-organizational information transfer. Another effects is about organization leadership and knowledge nature.

Leaderships can help knowledge sharing in general. They can help it by providing vision, guidance, and resources, and top management support. Also leadership can be exercised through executive involvement, formal authority, and informal leadership, encouraging employees to participate, providing financial resources and etc. despite of existence literature, in public sector, leadership cannot involve effectively in inter-organizational information transfer. It is because of governmental laws. In public sector, information transfer must be done through the official routines determined by governmental laws. For changing current routines or designing and implementing new routines, it is needed to legislate new law or adjustment of current laws. In other word, inflexibility of governmental laws causes to eliminate role of senior managers for facilitating inter-organizational information transfer.

By this, it can be inferred that inflexibility of governmental laws showed itself as a barrier but not for all. For example knowledge nature (implicit or explicit knowledge) were introduced as important determinants of knowledge sharing in literatures; but in public sector knowledge nature and its details are determined by governmental laws. Organizational information is often recorded and exactly transferred after requesting for it, so it can be said that in public sector, knowledge nature is not an important determinant for inter-organizational information transfer. In addition to this sometimes conflicts between governmental laws generate some new barriers for inter-organizational information transfer.

- **Organizational features:** collaborative processes are shaped based on inter-organizational collaboration, so organizations features are important for inter-organizational information transfer. First of all is organization workload. If an organization want to participate in inter-organizational information transfer, it is necessary to provide free time for their personnel's. Also personnel's must have access to external and

internal source of organizational knowledge and information. In the public sector, organizations activities assigned to personnel's have priority over external requests for information. So it is concluded that heavy workload, make personnel's busy and is a barrier to answering external requests like information requests. Beside workload, organizational structure should be mentioned here. Organizational structure defines position of organizations and personnel's relative to other organizations and personnel's. It helps personnel's to identify official communication channels. If personnel's use other channels for obtaining information and knowledge from external resources, obtained information is not valid and cannot be used for organizations current activities and decision making processes. Official routine and communication channels are defined by governmental laws too, so it is concluded that bureaucracy is results of governmental laws.

In addition to organizations features, organizations employees have a great role in knowledge transfer too. Their capability, experience and also attitude to inter-organizational information transfer were mentioned in literatures. In our case only their capability and experience were important. Because of governmental laws they have to participate in information transfer even they have negative attitude to it.

While the research has made significant contribution to collaborative processes and determinants of information and knowledge transfer in it especially in public sector, there are limitation that need to be considered when interpreting study finding. Because of our limitation in finding and selecting case, using our finding should be done carefully. New data may be collected from different cases by different approach such as survey to revalidate our finding. Also in the future research, it is important to focus on dimension of factors and their relations with each other.

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